

Listing of Claims

1. (original) An aluminum alloy for a cast engine block, said alloy consisting essentially of, by weight, 9.5 to 12.5% silicon, 0.1 to 1.5% iron, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, up to 0.05% strontium and the balance aluminum, where the weight ratio of manganese to iron is at least 1.2 to 1.75 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 to 1.2 when the iron content is less than 0.4% of the alloy.

2. (original) An aluminum alloy for a cast engine block, said alloy consisting essentially of, by weight, 9.5 to 12.5% silicon, 0.1 to 1.5% iron, 1.5 to 4.5% copper, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, 2.0% max zinc, 0 to 1.5% nickel, 0.25% maximum titanium, up to 0.05% strontium and the balance aluminum, where the weight ratio of manganese to iron is at least 1.2 to 1.75 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 to 1.2 when the iron content is less than 0.4% of the alloy.

3. (original) An aluminum alloy for a cast engine block as recited in claim 2 in which the weight ratio of manganese to iron is at least 1.2 to 1.75 when the copper content exceeds 1.5% or the nickel content exceeds 0.75%.

4. (original) An aluminum alloy for a cast engine block, said alloy consisting essentially of, by weight, 11.25 to 11.75% silicon, 0.35 to 0.65% iron, 1.75 to 2.75% copper, 0.4 to 1.2% manganese, 0.15 to 0.3% magnesium, 0.5% max zinc, a trace of nickel, 0.2% maximum titanium, 0.01% to 0.03% strontium and the balance aluminum, where the weight ratio of manganese to iron is at least 1.2 to 1.75.

5. (original) A cast cylinder block for an internal combustion engine when formed of the alloy recited in claim 1.

6. (original) A cast cylinder block for an internal combustion engine when formed of the alloy recited in claim 2.

7. (original) A cast cylinder block for an internal combustion engine when formed of the alloy recited in claim 3.

8.(original) A cast cylinder block for an internal combustion engine when formed of the alloy recited in claim 4.

9. (new) An aluminum casting alloy, said alloy comprising, by weight, 9.5 to 12.5% silicon, 0.1 to 1.5% iron, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, up to 0.05% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy.

10. (new) An aluminum casting alloy as recited in claim 9, said alloy comprising, by weight, 9.5 to 12.5% silicon, 0.1 to 1.5% iron, 1.5 to 4.5% copper, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, 2.0% max zinc, 0 to 1.5% nickel, 0.25% maximum titanium, up to 0.05% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy.

11. (new) An aluminum casting alloy as recited in claim 10 in which the weight ratio of manganese to iron is at least 1.2 when the copper content exceeds 1.5% or the nickel content exceeds 0.75%.

12. (new) An aluminum casting alloy as recited in claim 9, said alloy comprising, by weight, 9.5 to 11.75% silicon, 0.1 to 1.5% iron, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, up to 0.05% strontium, and aluminum, where the weight ratio

of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy.

13. (new) An aluminum casting alloy as recited in claim 9, said alloy comprising, by weight, 9.5 to 11.75% silicon, 0.1 to 1.5% iron, 1.5 to 4.5% copper, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, 2.0% max zinc, 0 to 1.5% nickel, 0.25% maximum titanium, up to 0.05% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy.

14. (new) An aluminum casting alloy as recited in claim 13 in which the weight ratio of manganese to iron is at least 1.2 when the copper content exceeds 1.5% or the nickel content exceeds 0.75%.

15. (new) An aluminum casting alloy as recited in claim 9, said alloy consisting essentially of, by weight, 11.25 to 11.75% silicon, 0.35 to 0.65% iron, 1.75 to 2.75% copper, 0.4 to 1.2% manganese, 0.15 to 0.3% magnesium, 0.5% max zinc, a trace of nickel, 0.2% maximum titanium, 0.01 % to 0.03% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy.

16. (new) An aluminum casting alloy as recited in claim 9, said alloy comprising, by weight, 9.5 to 11.75% silicon, 0.1 to 1.5% iron, 0.2 to 3 % manganese, 0.1 to 0.6% magnesium, up to 0.05% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is

less than 0.4% of the alloy, and the microstructure of the cast alloy is substantially free of primary silicon.

17. (new) An aluminum casting alloy as recited in claim 9, said alloy comprising, by weight, 9.5 to 11.75% silicon, 0.1 to 1.5% iron, 1.5 to 4.5% copper, 0.2 to 3% manganese, 0.1 to 0.6% magnesium, 2.0% max zinc, 0 to 1.5% nickel, 0.25% maximum titanium, up to 0.05% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy, and the microstructure of the cast alloy is substantially free of primary silicon.

18. (new) An aluminum casting alloy as recited in claim 17 in which the weight ratio of manganese to iron is at least 1.2 when the copper content exceeds 1.5% or the nickel content exceeds 0.75%.

19. (new) An aluminum casting alloy as recited in claim 9, said alloy consisting essentially of, by weight, 11.25 to 11.75% silicon, 0.35 to 0.65% iron, 1.75 to 2.75% copper, 0.4 to 1.2% manganese, 0.15 to 0.3% magnesium, 0.5% max zinc, a trace of nickel, 0.2% maximum titanium, 0.01 % to 0.03% strontium, and aluminum, where the weight ratio of manganese to iron is at least 1.2 when the iron content is equal to or greater than 0.4% and the weight ratio of manganese to iron is at least 0.6 when the iron content is less than 0.4% of the alloy, and the microstructure of the cast alloy is substantially free of primary silicon.